

In the Claims:

Kindly cancel claims 1-34 without prejudice.

Kindly add the following claims:

1 ~~37~~. Apparatus for processing a signal to determine a spatial position comprising:

signal input means, processing means, and memory means, wherein said processing means receives input signals from said input means and produces an output signal indicative of a spatial position by executing instructions read from said memory means;

said memory means stores a plurality of signal templates;

said processing means processes an input signal to produce transformed data that conveys a characteristic of said input signal that is correlated to an active spatial position;

— said processing means compares said transformed data with said stored templates to produce a similarity score for each of said templates; and

said processing means interpolates a plurality of selected similarity scores to produce said output data identifying said active spatial position.

2 ~~38~~. Apparatus according to claim ~~37~~, including a plurality of transducer means wherein each of said transducer means is configured to produce an input signal, and steps performed by said processing means are repeated to identify a plurality of active spatial positions.

3 ~~39~~. Apparatus according to claim ~~38~~, wherein said processing means combine said plurality of spatial positions to

identify a location of a common source.

4 ~~40~~. Apparatus according to claim 3¹/₁, wherein said processing means processes an input signal to produce said transformed data by identifying characteristic frequency-related components of an active input signal.

5 ~~41~~. Apparatus according to claim 3¹/₁, including surface means, wherein said signal input means includes acoustic transducer means and said acoustic transducer means are arranged to generate active input signals in response to movements made against said surface means.

6 ~~42~~. Apparatus according to claim 4¹/₁, wherein said surface means is finger-operable.

7 ~~43~~. Apparatus according to claim 4¹/₂, wherein said surface means is curved.

8 ~~44~~. Apparatus according to claim 4¹/₃, wherein said curved surface is fully enclosed.

9 ~~45~~. Apparatus according to claim 4¹/₄, wherein said fully enclosed curved surface is substantially spherical.

10 ~~46~~. Apparatus according to claim 4¹/₅, wherein said surface and said transducers are remotely located from said processing means.

11 ~~47~~. A method of signal processing, in which an interaction at a spatial position produces an input signal and said input signal is processed to produce an output signal indicative of said spatial position, comprising the steps of:

processing an active input signal to produce transformed

data that conveys a characteristic of said input signal that is correlated to an active spatial position;

comparing said transformed data with a plurality of stored data templates of known spatial position;

producing a similarity score for each of said template comparisons;

interpolating selected similarity scores to identify a value for said active spatial position; and

producing an output signal in response to said interpolated position value.

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~~12~~ 48. A method according to claim ~~47~~, wherein said spatial position is at a distance from a transducer from which said input signal is derived.

¹¹
~~13~~ 49. A method according to claim ~~47~~, including the step of identifying a plurality of said spatial positions in response to respective signals derived from a plurality of respective transducer means.

¹³
~~14~~ 50. A method according to claim ~~49~~, wherein a plurality of transducer means receive inputs from a common location and said location is identified by combining said plurality of spatial positions.

¹³
~~15~~ 51. A method according to claim ~~49~~, wherein said transform data is generated by an identifying characteristic of frequency-related components of said signal.

¹³
~~16~~ 52. A method according to claim ~~49~~, wherein said active input signal is generated by transducing means in response to the